Artistry in Sound

ONKYO

TX-866/844

Quartz Synthesized Tuner Amplifier

Instruction Manual

• *Congratulations on your purchase of the ONKYO TX-866, TX-844 Tuner-Amplifier.*
• *Please read this manual thoroughly before making connections and turning power on.*
• *Following the instructions in this manual will enable you to obtain optimum performance and listening enjoyment from your new TX-866, TX-844.* • *Please retain this manual for future reference.*

CONTENTS

Features	1
Important safeguards	2
Precautions	3
Before using this unit	3
System connections	4
Control positions and names	8
Operations	10
Troubleshooting guide	13
Specifications	14

Features

- **Plenty of Clean Power**
  TX-866: 80 watts of continuous power per channel into 8 ohms with no more than 0.04% total harmonic distortion. (2 x 185 watts dynamic power at 2 ohms)
  TX-844: 60 watts of continuous power per channel into 8 ohms with no more than 0.08% total harmonic distortion. (2 x 155 watts dynamic power at 2 ohms)
- **Direct Access Tuning**
  Instead of using the UP or DOWN tuning keys to scan through the available frequencies untill you find your station, Direct Access Tuning lets you punch in the broadcast frequency directly using the 10 numeric keys.
  For example, to select 103.5 MHz you simply press the 1, 0, 3 and 5 keys.
- **Classified Memory Preset**
  The memory presets are divided into six classes, A through F, which you can use for different types of programs (rock, news, classical, etc.). Or you each member of the family can have a separate class (class A for Dad, class B for Mom, class D for Junior). You can assign each preset station to one of the classes. The tuner will give you a sample of each station, in turn, in a particular class.
- **Multiple Room Remote System**
  You may wish to install an optional remote sensor in another room in which you have installed an additional set of speakers. Then you will be able to operate the TX-866 or TX-844 by remote control while listening in that room, without having to go back to the room in which the tuner amplifier is located.
  You can also install yet another sensor and purchase an optional universal remote control to operate a VCR, videodisc player, TV monitor, and/or other AV components from other manufacturers; this too is possible from another room.
- **40-Station FM/AM Random Preset Memory**
- **APR (Automatic Precision Reception) System**
- **All Full-Logic Keys (Including Power On/ Standby)**
- **Seven Input sources Including Video Input and Dubbing Facilites**
- **Dynamic Bass Expander and Stereo Image Expander (TX-866)**
- **Selective Tone/Loudness Control**
- **Remote Controllable Motor-Driven Volume Knob**
- **Sleep Timer (Max. 90 Minutes; Operable via Remote Control)**

CAUTION

"TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL."

- The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

- The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

"WARNING"

"TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE."

- For models having power cords with a polarized plug.

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

- Sur les modèles dont la fiche est polarisée.

ATTENTION: POUR PRÉVENIR LES CHOCS ÉLECTRIQUES NE PAS UTILISER CETTE FICHE POLARISÉE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ÊTRE INSÉRÉES À FOND SANS EN LAISSER AUCUNE PARTIE À DÉCOUVERT.

Important safeguards

1. **Read Instructions** – All the safety and operating instructions should be read before the appliance is operated.
2. **Retain Instructions** – The safety and operating instructions should be retained for future reference.
3. **Heed Warnings** – All warnings on the appliance and in the operating instructions should be adhered to.
4. **Follow Instructions** – All operating and use instructions should be followed.
5. **Water and Moisture** – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. **Carts and Stands** – The appliance should be used only with a cart or stand that is recommended by the manufacturer.

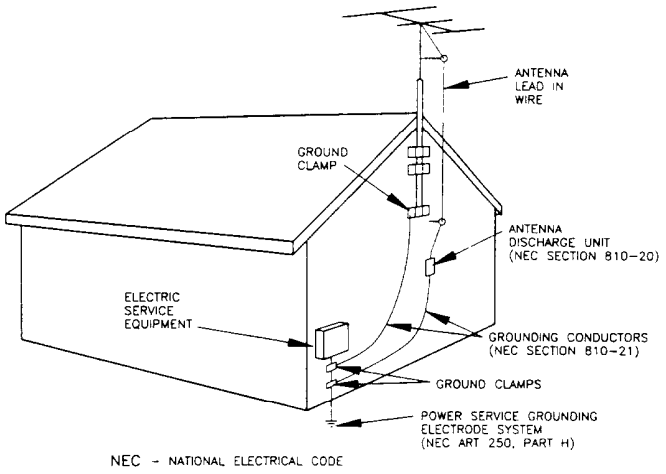
6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

PORTABLE CART WARNING

S3125A

7. **Wall or Ceiling Mounting** – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. **Ventilation** – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. **Heat** – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. **Power Sources** – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. **Grounding and Polarization** – The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.
12. **Power-Cord Protection** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
13. **Cleaning** – The appliance should be cleaned only as recommended by the manufacturer.
14. **Power Lines** – An outdooor antenna should be located away from power lines.
15. **Nonuse Periods** – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
16. **Object and Liquid Entry** – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
17. **Damage Requiring Service** – The appliance should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the appliance; or
    C. The appliance has been exposed to rain; or
    D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    E. The appliance has been dropped or the enclosure damaged.
18. **Servicing** – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
19. **Outdoor Antenna Grounding** – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure 73.1.

FIGURE 73.1:
EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)
NEC - NATIONAL ELECTRICAL CODE

S2898A

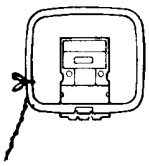
Precautions

1. **Warranty Card**
   The serial number is written on the rear panel of this unit. Copy the serial number and model number onto your warranty card and keep it in a safe place.
2. **Recording Copyright**
   Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.
3. **AC Fuse**
   The fuse is located inside the chassis and is not user serviceable. If power does not come on, contact your Onkyo service center.
4. **Care**
   From time to time you should wipe off the front and rear panels and the cabinet with a soft cloth. For heavier dirt, dampen a soft cloth in a weak solution of mild detergent and water or a mild ammonia cleaner, wring it out dry, and wipe off the dirt. Following this, dry immediately with a clean cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since these could damage the finish or remove the panel lettering.

Memory Preservation
This unit does not require memory preservation batteries. A built-in memory power back-up system preserves the contents of the memory during power failures and even when the unit is unplugged. The unit must be plugged in and the power switch turned on and off once in order to charge the back-up system. Note that since this is not a permanent memory, the power switch must be turned on and off a few times each month to keep the back-up system operative.
The memory preservation period after power has been turned off varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of a few weeks after the last time power has been turned off. This period is shorter when the unit is exposed to a highly humid climate.

Before using this unit

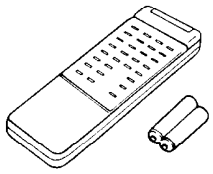
1. **Supplied Accessories**



AM loop antenna x 1

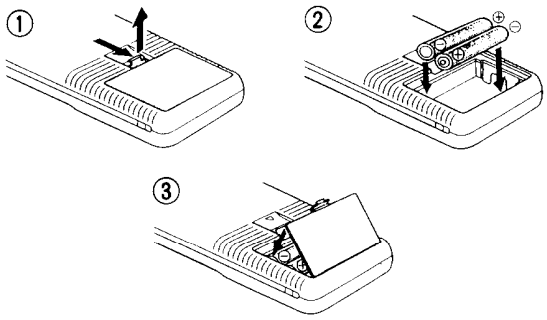
T-shaped FM antenna X 1

RI remote control cable x 1



Remote control transmitter x 1
Batteries x 2

2. **Transmitter Battery Insertion**



Precautions when using batteries

- The remote control transmitter is powered by two batteries. Before using this unit for the first time, insert the two batteries (included) as shown in the diagram.
- Average battery life is about one year. This period may be shorter depending on the frequency of use and environment (temperature and humidity) in which the remote control transmitter is used.
- If the remote control transmitter does not operate even though front panel controls function normally, the batteries should be replaced. Use only batteries listed in the following chart.

Type	Voltage	Size
Manganese	1.5V	AA R6 UM-3

NOTES:

1. Do not leave an expired battery in the case as it may leak or damage the battery case.
2. When inserting the batteries, be sure the (+) and (−) ends are properly aligned.
3. Do not use nickel-cadmium (rechargeable) batteries.
4. Do not use one specified (manganese) battery and one alkaline Battery at the same time.
5. Replace both batteries at once; do not use one old and one new battery together.

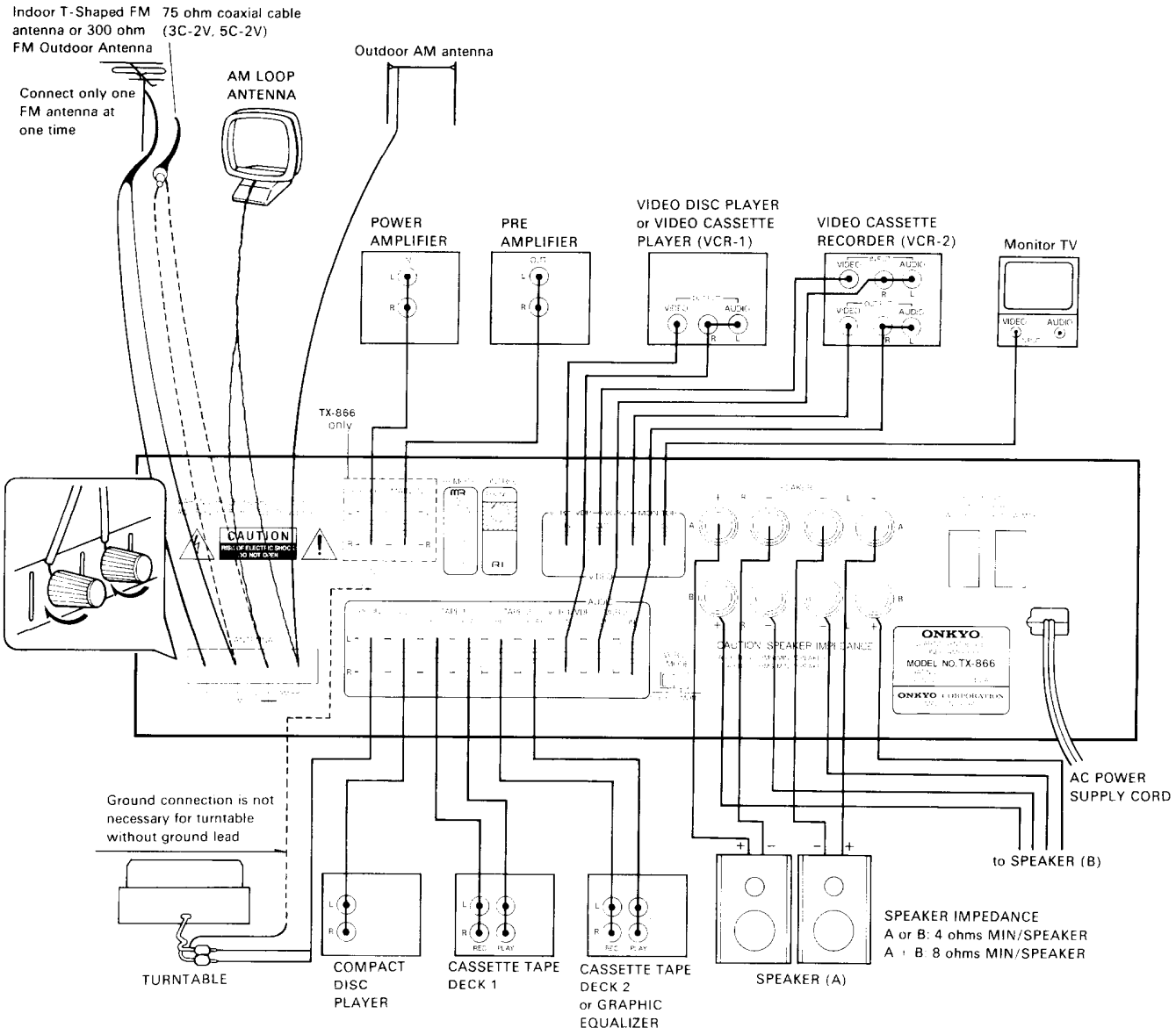
System connections

General

Switch the main power switch off before performing connections. Also be sure to perform left and right channel connections properly.

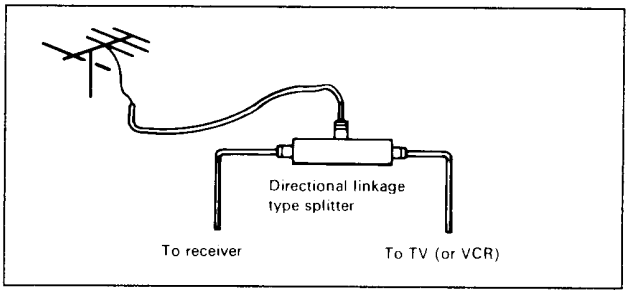
Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.


Indoor T-Shaped FM antenna or 300 ohm FM Outdoor Antenna
75 ohm coaxial cable (3C-2V, 5C-2V)
Outdoor AM antenna
AM LOOP ANTENNA
Connect only one FM antenna at one time
POWER AMPLIFIER
PRE AMPLIFIER
VIDEO DISC PLAYER or VIDEO CASSETTE PLAYER (VCR-1)
VIDEO CASSETTE RECORDER (VCR-2)
Monitor TV
TX-866 only
CAUTION
ONKYO
MODEL NO. TX-866
AC POWER SUPPLY CORD
to SPEAKER (B)
Ground connection is not necessary for turntable without ground lead
TURNTABLE
COMPACT DISC PLAYER
CASSETTE TAPE DECK 1
CASSETTE TAPE DECK 2 or GRAPHIC EQUALIZER
SPEAKER (A)
SPEAKER IMPEDANCE
A or B: 4 ohms MIN/SPEAKER
A + B: 8 ohms MIN/SPEAKER

FM Antenna Connections

Use the T-shaped antenna if you live in an area where signal strength of FM broadcasts is high. Connect the antenna to the FM 300 ohms terminals and place the antenna on a wall or other surface in the position in which reception is best. If signal strength is low in your area, use a multi-element FM outdoor antenna and connect to this unit using a 75 ohm coaxial cable because this type of cable is more resistant to interference than 300 ohm cable. Consult your Onkyo authorized service center about the right type of antenna for your area.



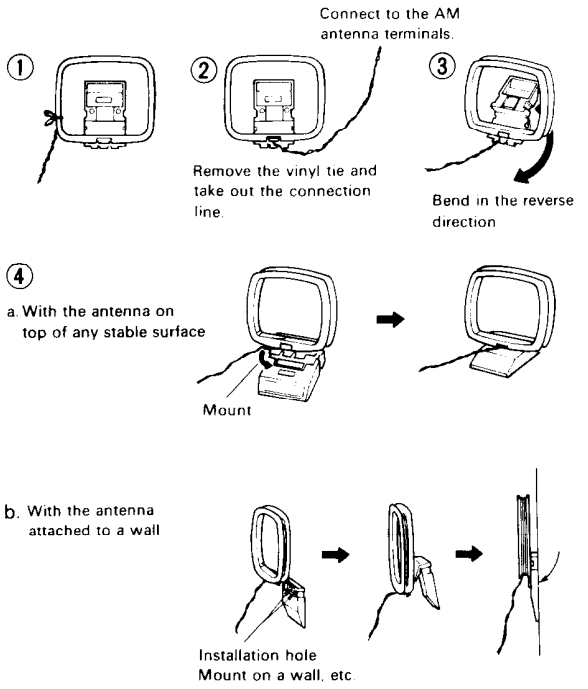
NOTE:

Do not use the same antenna for both FM and TV (or VCR) reception since the FM and TV (or VCR) signals can interfere with each other. If you must use a common FM/TV (or VCR) antenna, use a directional linkage type splitter.

AM Antenna Connections

An AM loop antenna is included in the installation instructions bag. Take out the connection line and connect it to the AM antenna terminals. This loop antenna can be placed on top of any stable surface or attached to a wall. Try several positions to determine which gives the best reception. Be sure the antenna is not near a speaker, power cord, television set, VCR, or motorized appliances. When using an external AM antenna, do not remove the loop antenna; connect both antennas to the AM antenna terminals.

AM loop antenna assembly


Connect to the AM antenna terminals.
①
②
③
Remove the vinyl tie and take out the connection line.
Bend in the reverse direction
④
a. With the antenna on top of any stable surface
Mount
b. With the antenna attached to a wall
Installation hole
Mount on a wall, etc.

NOTE:

AM reception is easily affected by television sets and VCRs. Therefore, AM reception may be poor if this unit is placed too close to a TV or a VCR.

Speaker Connections (SPEAKERS)

1. Connect the speakers to A and/or B terminals.
2. When connecting speakers, proper polarity is important. Always connect the (+) terminal (red) on this equipment to the (+) terminal on the speaker and the (−) terminal (black) on this equipment to the (−) terminal on the speaker.
3. Do not connect a single speaker in parallel to the right and left channel outputs.
4. Use speaker cables that have a low impedance and that are as short as possible.

- Attach speaker cables to the rear panel speaker terminals with care, being sure that connections are made firmly and that there is no possibility of a short circuit occurring.

Compact Disc Player or Other Component Connections (CD)

Connect the output leads of the CD player or an additional audio component to the CD jacks. An Onkyo CD player with remote control that has the RI mark can be operated by the TX-866/844 (Please refer to "Connections for Remote Control" on page 6.) For more details, refer to your CD player instruction manual.

Turntable Connections (PHONO)

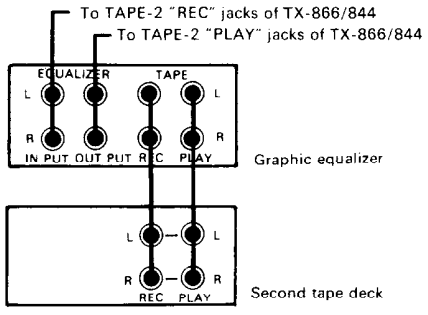
Connect the output leads of the turntable to the PHONO jacks. Be sure to connect the ground (earth) lead wire from the turntable to the ground terminal (GND). Lack of proper ground connection will cause hum. Turntables not provided with GND wires do not need to be connected.

1. Place the turntable on a firm shelf or deck free from vibrations (especially those generated by the speaker system). If the turntable is permitted to pick up such unwanted vibrations, not only with the performance of the unit drop, but distortion in the bass frequencies and howling in the speakers may also occur.
2. Check the turntable instruction manual for any other precautions.
3. The loud noises that occur when connecting and disconnecting the turntable leads, replacing the cartridge or lowering the tonearm could damage the speakers. Always turn the power switch off before making connections.
4. If an Onkyo turntable with remote control jack is used with this unit, the remote control transmitter can also be used to start and stop turntable operation. In this case, the turntable and TX-866/844 must be connected with a remote control cable. Insert the plug into the PHONO jack of the REMOTE CONTROL on the rear panel of the TX-866/844. (Please refer to "Connections for Remote Control on page 6.)

Tape Deck and Graphic Equalizer Connections (TAPE-1, TAPE-2)

1. This unit has facilities for two tape decks. If you are using only one tape deck, connect it to the TAPE-1 jacks. If you have two tape decks, connect one to the TAPE-1 jacks and the other to the TAPE-2 jacks.
2. Connect the output leads of the tape decks to the TAPE-1 and TAPE-2 "PLAY" jacks. Connect the input leads of the tape decks to the TAPE-1 and TAPE-2 "REC" jacks of the unit. For more details, refer to your tape deck instruction manual.
3. To connect a graphic equalizer, too, use the TAPE-2 jacks and connect the second tape deck to the tape jacks of the equalizer. (See the figure)

To connect a graphic equalizer and second tape deck to the TAPE-2 jacks.



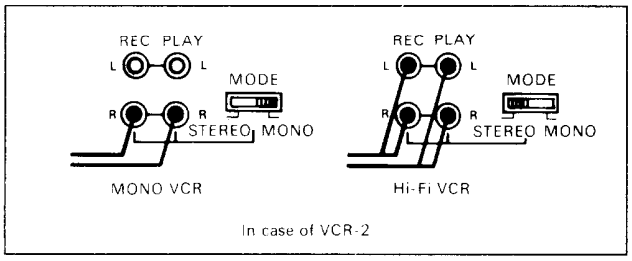
4. If you have an Onkyo tape deck with the RI remote control jack, connect it to the TAPE-1 jacks. Please refer to the section "Connections for Remote Control" on 6 page regarding connection of the remote control cable.

Video Disc Player (or Video Cassette Player) Connections (VCR-1/VDP)

Connect the VIDEO output of the video disc player to the TX-866/844 (VIDEO) VCR-1/VDP "IN" jack and the AUDIO output to the (AUDIO) VCR-1/VDP "IN" jack. The VCR-1/VDP jack is only for playback, there is no OUT jack. If the audio output from the video unit is monaural, connect to VCR-2. For more details, refer to the video disc player instruction manual.

Video Cassette Recorder Connections (VCR-2)

1. Connect the VIDEO output of the VCR to the rear panel (VIDEO) VCR-2 "IN" jack and the VIDEO input of the VCR to the rear panel (VIDEO) VCR-2 "OUT" jack. Then connect the AUDIO output of the VCR to the (AUDIO) VCR-2 L and R "IN" jacks. Finally, connect the AUDIO input of the VCR to the (AUDIO) VCR-2 L and R "OUT" jacks.
2. When using a monaural VCR (having a single audio input and output), set the VCR-2 MODE switch on the rear panel to MONO and use either the R or L audio jacks. If the switch is in the "STEREO" position, sound will be heard from only the right or left speaker system.



In case of VCR-2

3. When using a playback-only VCR, only the output connections need to be performed.
4. For more details, refer to the VCR instruction manual.

TV Connections (MONITOR)

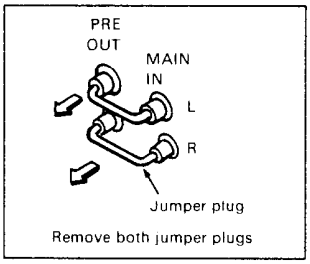
1. Connect the TV VIDEO input to the TX-866/844 MONITOR "OUT" jack. There is no need to perform an audio connection since sound will be sent directly from the TX-866/844 to the speaker systems.
2. The TX-866/844 does not have an RF converter. Therefore, it can be used with only a monitor TV equipped with a video input jack.
3. Since the television set, tuner (FM/AM) section of this unit can cause interference that may disrupt sound and/or picture quality, the TV and TX-866/844 and their respective connection cables should be placed as far apart as possible. The use of a common TV/FM antenna is not recommended (see antenna section).

AC Outlets

- **SWITCHED:**
  These outlets are switched on and off by the Power button on the front panel and remote control transmitter. Capacity is total 100 watts.

Amplifier Connections (PRE OUT/MAIN IN) (TX-866 only)

Another stereo power amplifier can be connected to the "PRE OUT" jacks. A separate stereo pre-amplifier can be connected to the "MAIN IN".



Remove both jumper plugs

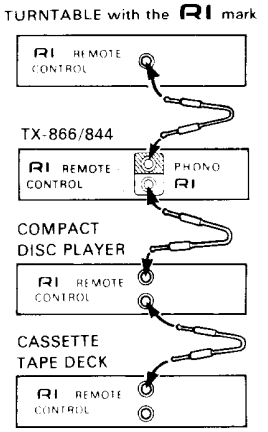
Make sure the power to the main unit is off before connecting the jumper plug. Also, make sure connections are made to the correct terminals.

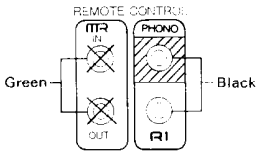
Connections for Remote Control (REMOTE CONTROL)

NOTE:

Onkyo turntables, cassette decks, CD players, etc. with the RI mark as well as Onkyo turntables without the RI mark can be operated by remote control.

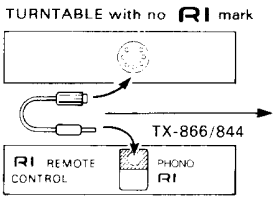
- A cassette tape deck, compact disc player, and turntable that have the Onkyo RI mark can be operated using the accessory remote control transmitter with the TX-866/844.





Connect a remote control cable to the black jack with the RI mark. Never connect it to the green jack with the MR mark.

An RI remote control cord equipped with a 0.136" (3.5mm) diameter miniature two-conductor phone plug is attached to the TX-866/844 and to any turntable or CD player, with the RI mark.



For this special cable.
Contact an Onkyo Service Center.
For a turntable
(3.5 mm pin to 7-pin plug cable)
part number: 2010140

Insert the accessory RI remote control cable plug attached to the Onkyo turntable with the RI mark into the PHONO of the TX-866/844 REMOTE CONTROL. To use an Onkyo compact disc player and cassette tape deck with the RI mark, insert the accessory remote control cable plug into the REMOTE CONTROL jack. As far as connecting sequence is concerned, it doesn't matter whether the cable is connected from the TX-866/844 to the cassette tape deck or to the compact disc player. The connecting sequence is fixed only for the turntable. The remote control transmitter is operated by facing it towards the remote control sensor of the TX-866/844.

- Onkyo turntables that can be remote controlled but do not have the RI mark. This equipment has a 7-pin DIN jack on the rear panel. Connect this jack and the jack on the rear of the TX-866/844 with the special cable for this purpose, which is sold separately.

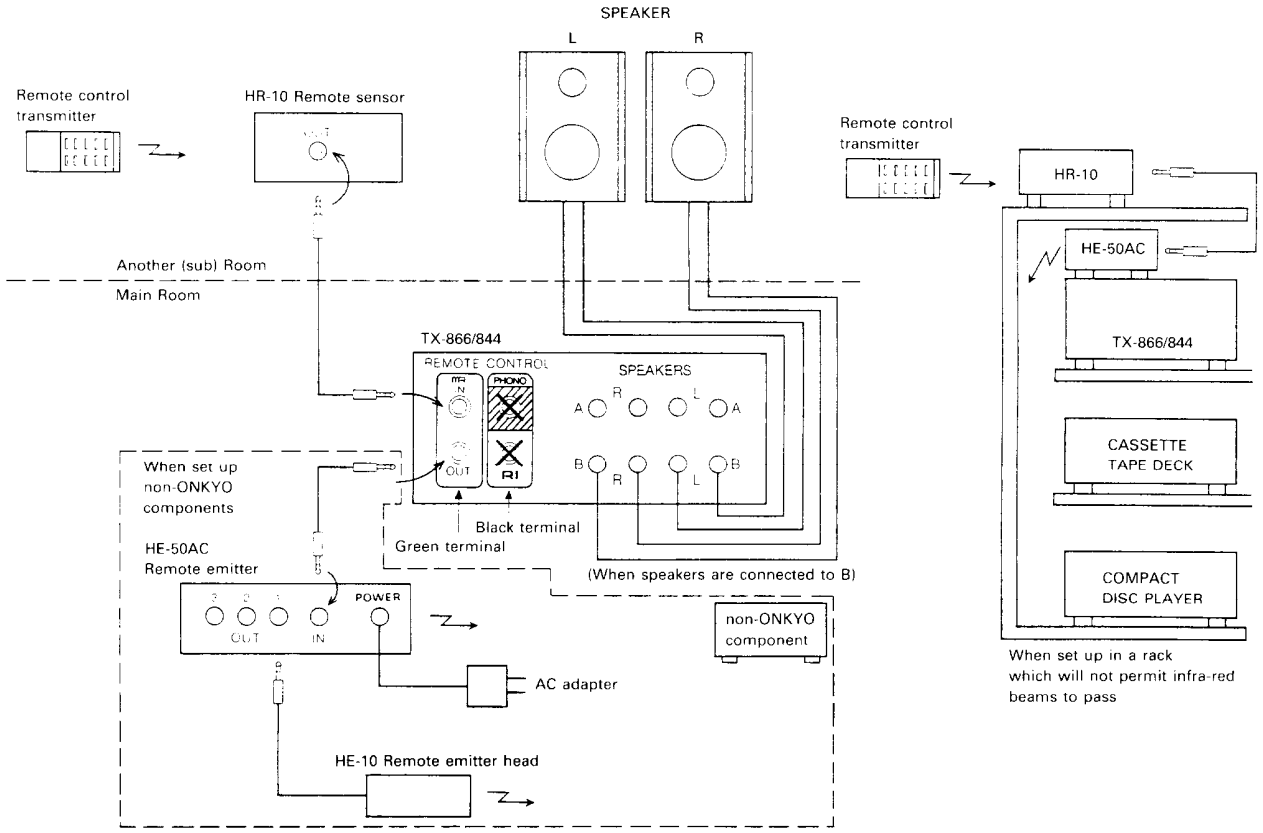
NOTE:

Remote control operation is not possible when only the remote control cable is connected. Remote control cable and pin cord must be connected.

Connections for Multiple Room Remote Control
Multiple Room Remote System (MR)

The Onkyo HR-10 Remote Sensor (sold separately) greatly increases system flexibility. Used with your TX-844 or TX-866, the HR-10 allows you to control speakers even when you are not in the same room as the TX-844 or TX-866. In addition to basic functions like speaker on-off and volume, you can also control most Onkyo CD Players and Cassette Decks that use the RI (Remote Interactive) system. Adding an HE-50AC Remote Emitter (also available as an option) allows you to control even the non-Onkyo components in your home entertainment system from a separate room. The HR-10/HE-50AC combination also works when the components are behind the closed doors of an equipment rack or wall unit.

When the HE-50AC is being used to control more than one device from a distance but the infrared beams from the HE-50AC remote control transmitter alone will not reach these devices, connect an HE-10 (remote emitter head) to the HE-50AC, and set it up to be aimed at the devices to be controlled. The HW-2 cable 6½' (2m) is attached with the HE-10. Up to three HE-10 units can be used with this equipment.



Remote sensor and emitter (like the HR-10 and HE-50AC) should be connected with low capacitance shielded two coaxial cable with mini-plug .136" (⅛") (3.5mm) diameter connectors. Maximum cable length is determined by the characteristics of the particular cable used but approximately 164' (50m) lengths are generally practical. Ready made cable complete with mini-plug connectors are available in the following lengths: 6½' (2m) (HW-2), 98⅞₁₆' (30m) (HW-30), and 164' (50m) (HW-50). We also offer HR-10W. (HR-10W is a single-packed system attached the HW-30 with the HR-10.) Contact your Onkyo dealer or service center for details.

(Speaker connections, especially for those in another rooms, should be made with heavy duty speaker cable. Conventional 18 gauge "zip cord," while generally suitable for speaker/amplifier connections within the main room, may not be sufficient for long inter-room runs. Onkyo recommends 16 or 14 gauge stranded wire for these installations.)

Refer to the instruction manual which comes with the HR-10 (HR-10W) when making these connections. To enable remote control operation when the TX-866/844 is mounted in a rack which will not permit infra-red beams to pass, place the HR-10 somewhere outside the rack and set the HE-50AC in a position which will permit remote control operation of the TX-866/844. Use the cables described above to make the necessary connections with the HE-50AC. Contact your ONKYO dealer or service center.

NOTES:

- Always unplug the AC power cords for the TX-844/866 and HE-50AC when connecting the MR.
- Insert the MR mini-plug into the GREEN TERMINAL on the rear panel of the TX-844/866.
- Don't forget that you can always control your TX-844/866 with its supplied remote controller, even when you are also using the HE-10/HE-50AC multi-room remote system. Simply aim the standard remote controller at the TX-866/844's front panel remote sensor.

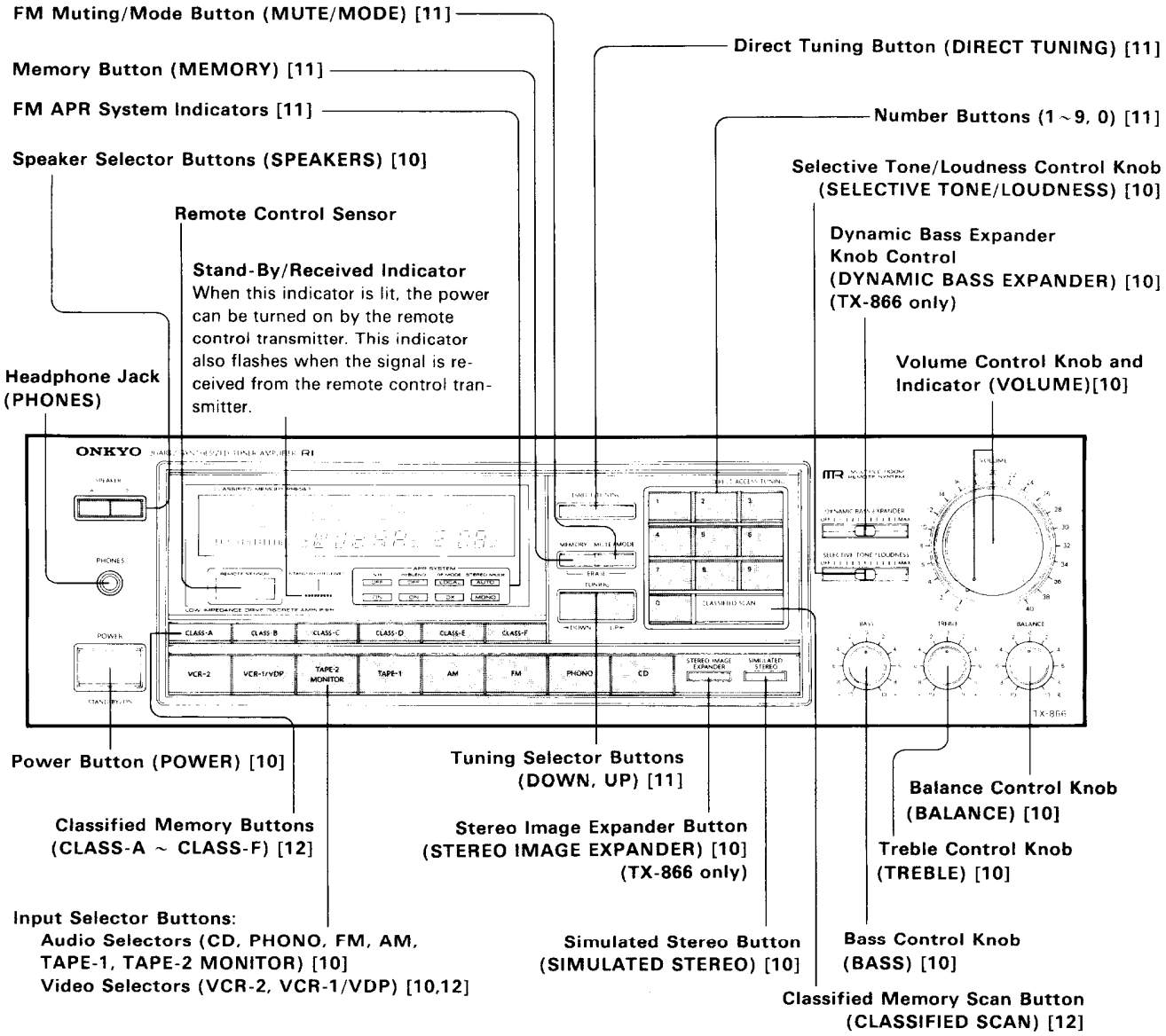
Control positions and names

NOTE:

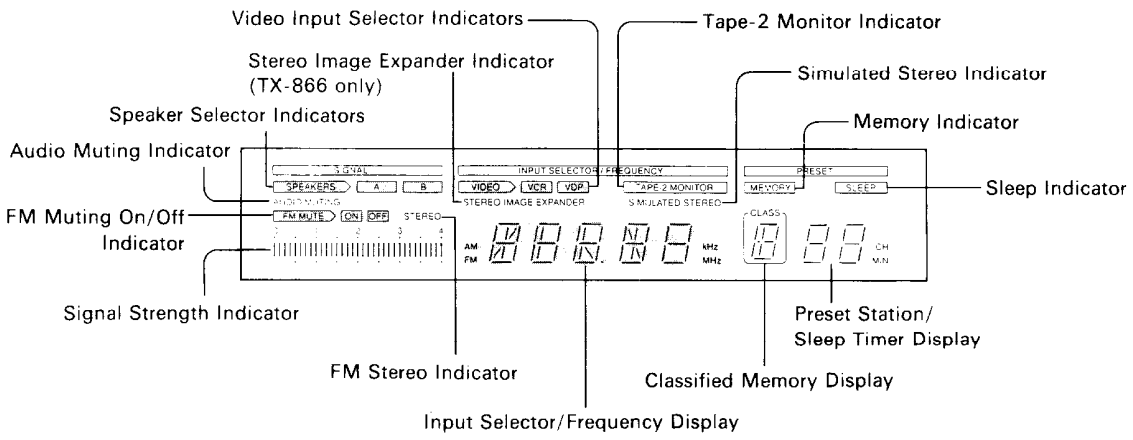
- The features, specifications, and display for the TX-866 and TX-844 are slightly different. Read this manual carefully to operate the model you have purchased correctly.

Front panel

For more information about buttons or controls, turn to the page number listed in the [ ].

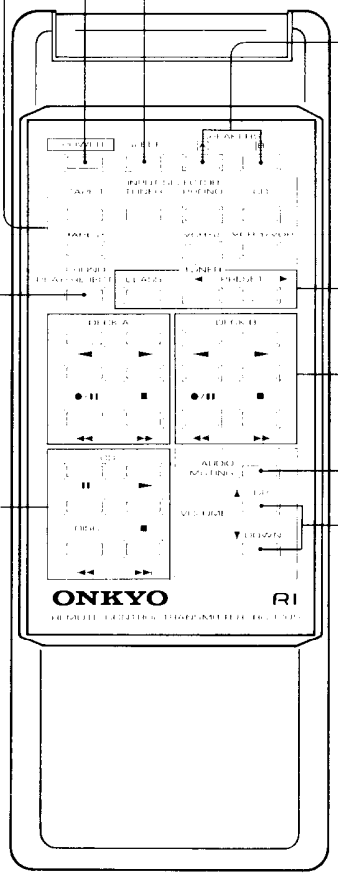

FM Muting/Mode Button (MUTE/MODE) [11]
Memory Button (MEMORY) [11]
FM APR System Indicators [11]
Speaker Selector Buttons (SPEAKERS) [10]
Remote Control Sensor
Stand-By/Received Indicator
When this indicator is lit, the power can be turned on by the remote control transmitter. This indicator also flashes when the signal is received from the remote control transmitter.
Headphone Jack (PHONES)
Direct Tuning Button (DIRECT TUNING) [11]
Number Buttons (1 ~ 9, 0) [11]
Selective Tone/Loudness Control Knob (SELECTIVE TONE/LOUDNESS) [10]
Dynamic Bass Expander Knob Control (DYNAMIC BASS EXPANDER) [10] (TX-866 only)
Volume Control Knob and Indicator (VOLUME)[10]
Power Button (POWER) [10]
Classified Memory Buttons (CLASS-A ~ CLASS-F) [12]
Input Selector Buttons:
Audio Selectors (CD, PHONO, FM, AM, TAPE-1, TAPE-2 MONITOR) [10]
Video Selectors (VCR-2, VCR-1/VDP) [10,12]
Tuning Selector Buttons (DOWN, UP) [11]
Stereo Image Expander Button (STEREO IMAGE EXPANDER) [10] (TX-866 only)
Simulated Stereo Button (SIMULATED STEREO) [10]
Classified Memory Scan Button (CLASSIFIED SCAN) [12]
Balance Control Knob (BALANCE) [10]
Treble Control Knob (TREBLE) [10]
Bass Control Knob (BASS) [10]

Display and indicators



3305

Remote control transmitter RC-170S



Sleep Button (SLEEP)
Press to set the power off timer. The sleep timer is a function which turns off the power to the system from the time it is set. When this button is pressed, "90 MIN" is displayed on the tuner's display for 5 seconds, and the power goes off 90 minutes later. Each time the button is pressed during 5 seconds, the timer setting changes, by 10 minute intervals, such as 80, 70, 60 .... While the sleep timer is operating, the SLEEP indicator is lighted. If the sleep button is pressed during this time, the amount of time remaining on the sleep timer is displayed, and if the button is pressed during that display, 10 minutes will be subtracted from that time.
If the button is pressed when the panel display shows 10 minutes or less, the sleep timer is cancelled, and the power is not turned off.

Power Button (POWER) [10]

Input Selector Buttons (TAPE-1, TUNER, PHONO, CD, TAPE-2, VCR-2, VCR-1/VDP) [10]
* When the TUNER button is pressed, the station which was received previously is recalled. Selection of AM or FM should be done on the main unit.

Phono Operation Button (PLAY/REJECT)
This button is used to operate the turntable. The phono operation button can be used only when the PHONO input selector button has been pressed. Each time the phono operation button is pressed, the remote control transmitter alternately emits the play or reject command.

CD Operation Buttons (CD)
These buttons are used to operate an ONKYO CD player with the RI mark.
- ▶ : Press this button to play the CD player.
- ❚❚ : Press this button to pause the CD play back. To resume disc play, press the PLAY button.
- DISC: Press to use for sequential selection of discs in the order they were loaded on the CD changer.
- ■ : Press this button to stop the CD player.
- ⏮ : Press this button to go back to the beginning of the current track and again to skip back to the previous track.
- ⏭ : Press this button to skip to the next track.

Speaker Selector Buttons (SPEAKERS) [10]

Tuner Operation Buttons (TUNER) [12]
CLASS: Class selector button
◀ PRESET ▶ : Preset memory DOWN/UP buttons

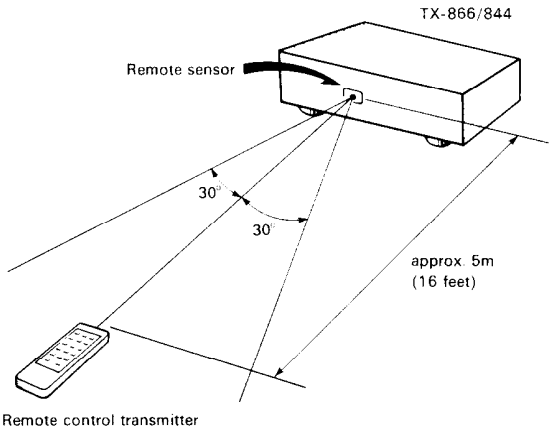
Tape Operation Buttons (DECK-A, DECK-B)
These buttons control Onkyo double cassette tape decks that can be remote controlled. Use the DECK-B buttons to control single cassette tape decks with the RI mark.
- ●/❚❚ : When this is pressed, the recording stand-by mode is entered.
- ◀ : The tape plays, moving from right to left, or, in the recording stand-by mode, recording begins.
- ■ : Interrupts all operations.
- ▶ : The tape plays, moving from left to right, or, in the recording stand-by mode, recording begins.
- ◀◀ : Fast forward from right to left.
- ▶▶ : Fast forward from left to right.

Audio Muting Button (AUDIO MUTING) and Indicator
This button temporarily switches off the sound from the speaker or headphone. Pressing this button will operate the TX-866/844 audio muting circuit. The audio muting indicator "AUDIO MUTING" will flash. Pressing the button again or using the POWER button on the remote control transmitter to turn the power on will turn off the audio muting.

Volume Buttons (▲ UP, ▼ DOWN) [10]

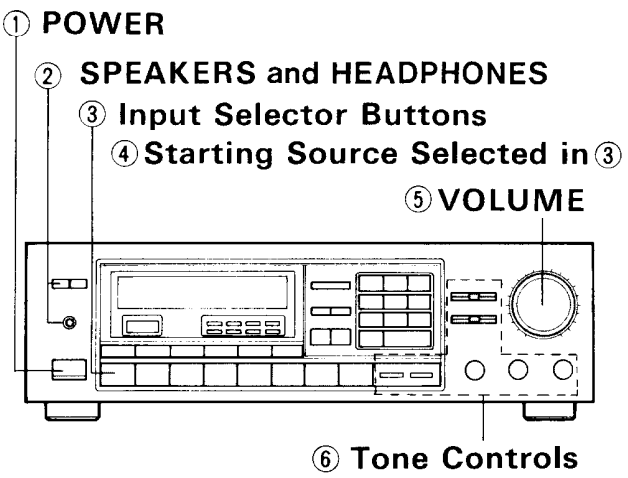
Using the remote control transmitter

1. Remove the batteries if the remote control transmitter is not going to be used for a long time.
2. The batteries of the remote control transmitter must be replaced periodically.
3. This unit uses infrared rays. Therefore, commands may not be received properly if the front panel of this unit is exposed to bright light. To prevent this from occurring, place this unit so that it is not directly exposed to bright light.
4. If this unit is placed inside an audio rack behind a glass door, the door should not have colored glass or have any decorations on it, since this could shorten the range or prevent commands from being received.
5. Use of other infrared remote control devices in the same room may cause interference.
6. The transmitter operates up to a distance of about five meters (16 feet). The transmitting window must always be pointed at the reception window when a command is sent to the TX-866/844.
7. If this remote control transmitter does not operate properly, confirm that the batteries are not dead. If the problem persists, contact your Onkyo Service Center.



Operations

To listen to your favorite Source



① Press the POWER button to turn on the power.
Press this button to switch the on/off status of the power supply and the AC outlets on the rear panel. Power can also be turned on by using the remote control power button.

② Select the desired pair of speakers by depressing the corresponding speaker selector button.
- This unit can drive two pairs of speakers in pairs (A or B) or fours (A + B). To listen to both speaker systems at once, depress both speaker selector buttons.
- Stereo headphones with a standard binaural plug can be connected here.

③ Press one of the desired Input Selector Button (CD, PHONO, FM, AM, TAPE-1, TAPE-2 MONITOR, VCR-1/VDP or VCR-2) Make sure that the connections between the input sources are correct.
- The button pressed is shown in Display. For FM or AM, the band and the frequency are shown in Display.
- Confirm that the TAPE-2 MONITOR indicator is off when a source other than the TAPE-2 MONITOR has been selected. Also check the audio muting is off.

④ Start play of the selected input source.
- Follow the operating instructions of that unit.
- If FM or AM is selected, please refer to the section "Tuner Reception".

⑤ Adjust the Volume Control knob to the appropriate level.
- Turn clockwise to increase the volume level. The volume can be adjusted manually and by the remote control transmitter's Volume UP/DOWN button.

⑥ Adjust the Tone Controls to obtain the desired tone setting.

■ **Bass Control Knob (BASS)**
Adjust to strengthen or weaken bass response.

■ **Treble Control Knob (TREBLE)**
Adjust to strengthen or weaken treble response.

■ **Balance Control Knob (BALANCE)**
Use this control to adjust the relative volume levels of the left and right speaker systems.

■ **Dynamic Bass Expander Level Control Knob (DYNAMIC BASS EXPANDER) (TX-866 only)**
Set this knob to the right position to add an extra feeling of power and realism to the low range. Its function is unlike that of the conventional bass control. Adjust level control to raise and lower the amount of the dynamic bass expander effect. Sliding this knob all the way to the left eliminates this effect.

■ **Selective Tone/Loudness Control Knob (SELECTIVE TONE/LOUDNESS)**
Set this knob to the right position, creating a clear reproduction quality of the ultra low frequencies and high frequencies. Boosting of a selective tone can be controlled via the level control. Sliding this knob all the way to the left eliminates this effect.

■ **Simulated Stereo Button (SIMULATED STEREO)**
Switching on this button lights up the display indicator and adds a stereo-like effect to monaural sources (TV programs, mono VCR, AM radio, etc).

■ **Stereo Image Expander Button (STEREO IMAGE EXPANDER) (TX-866 only)**
Switching on this button lights up the display indicator and adds an extra feeling of width and depth to stereo sound.

NOTE:

If an Onkyo cassette tape deck or CD player is connected to the TX-866/844 with the RI remote control cable, Operations ③ and ④ above will differ slightly because the direct function feature is used. Please see the section "Direct Function Feature" on this page.

Direct function feature

NOTE:

This function works when an Onkyo cassette tape deck or CD player with the RI mark is connected to a TX-866/844 with an RI remote control cable.

Just by directly operating the desired component (compact disc player, or tape deck), the TX-866/844 input selector automatically switches to that component. The component that was being used stops, and the desired component starts operation. Therefore, it is not necessary to switch the TX-866/844 input selector when changing listening sources.

Example
When the compact disc player's play button is pressed, the TX-866/844 input selector will switch automatically to "CD." If the current listening source was a tape deck, tape playback will stop and the compact disc player will start playing.

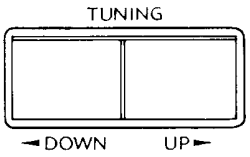
NOTE:

The direct function feature does not apply to turntable.

Tuner Reception

Press the FM or AM Input Selector button and make sure that the TAPE-2 MONITOR indicator is off and audio muting is off.

■ **Tuning with the TUNING buttons**

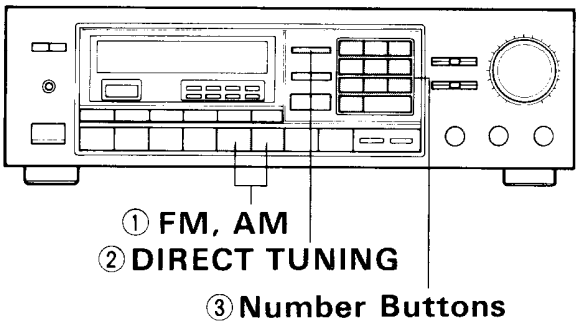


To tune in an FM or AM station not stored in the memory, press one of the Tuning selector buttons. If you press UP, the frequency is increased. Pressing DOWN decreases. Note that the frequency is changed in 200kHz steps in FM and 10kHz steps in AM when the Tuning selector button is pressed in single steps. If this button is pressed continuously for more than 0.5 seconds, the auto tuning mode is entered, and frequencies are scanned automatically. When a broadcast signal is received, scanning stops and that frequency is displayed. If a different frequency is desired, press the button once again.

- Scanning will not stop for broadcasts weak enough to be suppressed by the muting circuit. To receive a weak FM broadcast, set the MUTE/MODE button to the OFF position and select the frequency of the desired broadcast station.

■ **Receiving a station by inputting the frequency for the station directly (Direct Tuning)**

If the frequency for the desired station is known, input the frequency number directly.

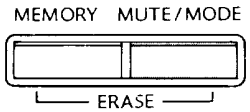


① Press the AM or FM button of the Input selector buttons.
② Press the DIRECT TUNING button.
- "--" or "-" will flash for 16 seconds in the Frequency Display.

③ Input the desired frequency number by using the Number Buttons while the cursors are flashing. For instance, if you wish to receive the station of 88.1MHz, press the Number Buttons, 8, 8 and 1.
- For AM reception, inputting a number to the 10kHz digit sets 0 to the 1kHz digit automatically.
- If the desired frequency set in this operation does not exist, the frequency which is the nearest and lower than the desired frequency will be received. If the frequency set is not in the receive frequency range, the frequency flashes for two seconds and then the previous frequency will be displayed.
- If a wrong frequency has been set, press the DIRECT TUNING button and start again.

■ **How to use the FM Muting/Mode Button (MUTE/MODE)**

In the Muting ON (STEREO) setting, FM stereo reception is possible and the muting circuit suppresses interstation noise and weak FM stations. In the OFF (MONO) setting, interstation noise will be heard and even weak FM stations can be received. (Muting/Mode operation is effective for only FM reception.)

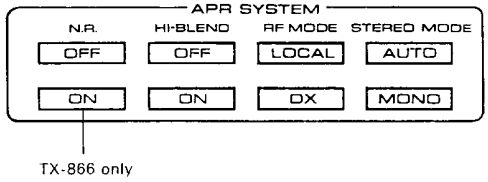


- The Stereo indicator will light up if the broadcast is being received in stereo. The Stereo indicator will not light up if the broadcast is monaural or too weak to be received in Stereo.

Automatic Precision Reception System (FM Mode)

APR system is Onkyo's unique computer-controlled system. APR system automatically sets the RF stage gain (Distance/Local), the NR function (OFF/ON) (TX-866 only) for reducing noise in weak signals, the HI-BLEND function (OFF/ON) for reducing noise in weak stereo signals, and the auto stereo/mono reception modes to the proper settings for the qualily of the broadcast currently being received. This indicator changes each time the APR circuit switches between the LOCAL/DX, NR OFF/ON, HI-BLEND OFF/ON or AUTO/MONO to show the current APR setting. (APR system is effective for only FM reception.)

APR System Indicators



NOTE:

- When MUTE/MODE button is OFF (MONO), the APR Mode selection function does not operate, and the STEREO MODE indicator is forced to "MONO".
- The RF MODE will indicate LOCAL when sufficient signal is received.

Classified Memory Function

The memory can be divided (classified) for different users or programs of stations.

NOTE:

There are times when frequencies are left in the machine's memory from the final testing done prior to shipment. If this is the case with your TX-866/844, cancel unnecessary preset stations according to "How to cancel memorized stations" and memorize desired frequencies.

■ **How to classify stations**

With this model, six classes (CLASS A to F) are available and stations can be memorized in any class. A total of 40 stations can be memorized in classes from A to F. Although the same station can be memorized in different classes, the memory number for the station will differ depending on the order in which the station is memorized in the classes.

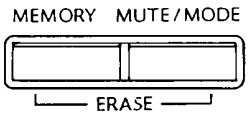
① Tune in the desired station (see section on "Tuner Reception").
② Press the MEMORY button.
- The MEMORY indicator will flash for 8 seconds.

③ Press the desired Classified Memory button (one of buttons A to F).
- The station is memorized in the selected class with the memory number which is the smallest of the unoccupied numbers in the class.

By repeating the operations above, up to 40 stations can be memorized. If an attempt is made to memorize 41 stations or more, "FULL" will be displayed in the Input Selector/Frequency Display, indicating that no more stations can be memorized.

■ **How to cancel memorized stations**

Retrieve the class number you want to cancel (see "How to retrieve memorized stations") and then press the MUTE/MODE button while holding down the MEMORY button. Another station can be memorized with the memory number which has been cancelled.



■ **How to retrieve memorized stations**

① Press the Classified Memory button for the desired class. If remote control is used, the class next to the present one is retrieved when the CLASS button is pressed.
- The memory number (station) which was being received before the class is retrieved will be received.

② There are several methods to proceed after the above operations are carried out. Use any of the following methods.

a. Pressing the same Classified Memory button again permits the next preset memory number (station) to be received.

b. Input the memory number you wish to receive by using the Number buttons.
- If the memory number consists of 2 digits, input two numbers, immediately one after the other. For instance, when inputting "15", "15" will not be registered if you wait more than one second before inputting "5", resulting in only "1" being registered.
- If a number other than a number from 1 to 40, or a number which has not been memorized is input, the number flashes for 2 seconds and then the number which was displayed before will be displayed.
- If a number between 1 and 4 is pressed, the display and station are changed 1 second later.

c. Press the CLASSIFIED SCAN button
- Stations memorized in the present class will be scanned in a order and the corresponding memory number will flash in the Preset station display at each scan. After the last memory number of the class is reached, scanning starts again from the first memory number of the class. Pressing the CLASSIFIED SCAN button again stops scanning.

d. When the PRESET UP or DOWN button of the remote controller is pressed, the memory number of the class currently being received will be incremented or decremented. Keeping pressing the button increments or decrements continuously. After the maximum or minimum number is reached, the next class or one before the present class will be entered.

Tape Recording

① Make all connections between the tape deck and the unit as shown in the System Connections Diagram.

② Radio: Press the FM or AM Input Selector button.
Record: Press the PHONO Input Selector button.
CD: Press the CD Input Selector button.
VCR-1/VDP: Press the VCR-1/VDP Input Selector botton.
VCR-2: Press the VCR-2 Input Selector button.

③ Put the tape deck in the recording mode. The recording can be monitored through the speakers or headphones as desired. For TAPE-2, turn on the corresponding Tape Monitor button to hear the signal that, having been recorded, is returned from the deck to the TX-866/844. (if the deck has three heads).

④ Set the proper recording level using the controls on the tape deck used for recording. Also, during recording and dubbing operations, never change the positions of any controls (bass, treble, etc.) on this unit.

Tape-to-Tape Dubbing

① Connect the two tape decks to this unit as shown in the System Connections diagram.

② Load the original tape in tape deck 1 and the blank tape in tape deck 2.

③ Press the TAPE-1 Input Selector button.

④ Put tape deck 1 in the playback mode and tape deck 2 in the recording mode.

⑤ The source signal can be monitored through the speakers or headphones, when the TAPE-2 MONITOR button is in the OFF position. If tape deck 2 has three heads, the just-recorded signal can be monitored (when the TAPE-2 MONITOR button is in the ON position). Refer to the tape deck instruction manuals for more details.

Using the Graphic Equalizer

① Connect the graphic equalizer to the TAPE-2 jacks on the rear panel.

② If a second tape deck is used, connect it to the tape jacks on the graphic equalizer.

③ Press the TAPE-2 MONITOR button.

④ Follow the graphic equalizer operating instructions.

⑤ To record an equalized signal, use tape deck 2 (connected to the equalizer) for recording.

Video Cassette Recorder (or Player) Playback

① Connect the VCR to the TX-866/844 as shown in the System Connections diagram. Note that a playback only video unit has no video or audio input jacks. Remember to switch the coresponding VCR mode switch to MONO when using a monaural VCR-2. If this is not done, sound will be heard from only one speaker. If the MONO setting is used with a hi-fi (stereo) VCR, even stereo sound will be heard in the monaural mode. Then connect a monitor or TV having a video input jack to the TX-866/844 video "MONITOR OUT" jack.

② Press the VCR-2 Input Selector button.

③ Switch on the monitor TV, and start playback of the VCR. The picture will be sent to the monitor TV and sound to the speakers connected to the TX-866/844.

④ Refer to the video cassette recorder instruction manual for additional information.

Video Disc Player to VCR Dubbing

Video disc programs can be recorded onto a VCR-2.

① Load a disc in the video disc player, and a blank tape in the VCR-2.

② Press the VCR-1/VDP Input Selector button.

③ Begin playback of the video disc player and recording of the VCR-2.

④ The VCR-1/VDP to VCR-2 duplication is possible when a second VCR output are connected to the VCR-1/VDP jacks.

⑤ Refer to the video disc player and VCR instruction manuals for additional information.

Video Disc Player Playback

① Connect the video disc player to the TX-866/844 as shown in the System connections diagram. Then connect a monitor or TV having a video input jack to the TX-866/844 video "MONITOR OUT"jack.

② Press the VCR-1/VDP Input Selector button.

③ Switch on the monitor TV, and start playback of the video disc player. The picture will be sent to the monitor TV and sound to the speakers connected to the TX-866/844.

④ Refer to the video disc player instruction manual for additional information.

Operations For Multiple Room Remote Control

- Make all connections as shown in the system connection diagram.
- Remember that the HR-10 can't display the operating status of the TX-844/866. We recommend the following procedure to avoid confusion:
  Select desired functions, including speaker selection, at the TX-844/866 itself.
  Start the program from the remote room and adjust volume accordingly.
  Remote program choices are not "locked in" and may be inadvertently changed by someone adjusting the TX-844/866. If you experience program interruptions, check the receiver itself.
- Non-Onkyo components can be operated by aiming that device's remote sensor at the HE-10 or HE-50AC. Programmable remote controllers, like Onkyo's RC-AV10 or RC-AV20, simplify system operation and are generally recommended.
- IF A PROBLEM OCCURS, use the TX-844/866's front panel controls to verify that the problem is with the remote controller. If there is no problem when operating the TX-844/866 directly, check the batteries in the remote controller first before assuming that there is a controller malfunciton.

NOTES:

- The source may be changed or recording being done on the TX- 866/844 may be interrupted when operations are done in the other room.
- Some non-ONKYO remote control transmitters cannot be used for.

Trouble shooting guide

NOTE:

If a problem occurs, first operate the unit using the front panel controls to confirm that it is not due to a malfunction (or worn out batteries) of the remote control transmitter.

Trouble	Cause	Remedy
No power.	● Power cord is disconnected. ● AC fuse blown.	● Connect power cord. ● Contact Onkyo Service Center.
Power but no sound.	● Tape monitor switch on. ● Audio muting switch on. ● Bad connections. ● Amplifier protection circuitry has been activated.	● Switch to off. ● Switch to off by remote control transmitter. ● Check input leads, speaker leads, pin plugs, etc. ● Contact Onkyo Service Center.
Hum, low frequency noise.	● Poor or no input ground. ● Poor or no phono motor ground.	● Check outer conductor of input plugs. ● Check for proper ground connection.
Howling when the volume is turned up.	● Turntable and speakers are too close together.	● Move them farther apart.
Rough or scratchy sound. High range is not clear.	● Stylus of pick-up is worn. ● Stylus tip is dirty. ● Treble control too high.	● Replace. ● Clean. ● Turn treble control down.
AM stations cannot be received.	● AM loop antenna is not attached.	● Connect the included AM loop antenna to the AM antenna terminals.
Buzzing noise on AM (particularly conspicuous at night or with weak stations).	● Noise from electrical apparatus such as fluorescent lamp.	● Move AM loop antenna to different position. ● Set up outdoor AM antenna.
High pitched noise or buzzing noise on AM.	● Noise from TV.	● Place the AM loop antenna as far as possible from the TV. ● Move unit away from TV set.
Crackling noise on AM and FM.	● Noise caused by turning fluorescent lamp on and off. ● Noise from automobile ignition.	● Move antenna as far as possible from the fluorescent lamp. ● Install and FM outdoor antenna as far as possible from the road. ● Change the position or direction of the outdoor antenna.
FM tuned and stereo indicators light but sound is distorted and stereo separation is bad.	● Station is too strong. ● Multiple reflection of the radio waves because of tall buildings or mountains.	● Change to T-shaped antenna. ● Use antenna which has better directivity and select a point where the distortion is least.
FM Signal Strength Indicators and stereo indicator flicker and hiss is heard on FM.	● Station is too weak. ● Stereo FM broadcasts cover only about half the distance of an ordinary broadcast.	● Install an outdoor FM antenna. ● Change the position or direction of the outdoor antenna.
No station or undesired station is recalled when a preset button is pressed.	● The power cord has been unplugged for a long time.	● The memory contents are lost. Store all stations again.
Front panel controls function but remote control transmitter does not.	● No batteries in remote control transmitter. ● Batteries have worn out.	● Insert batteries. ● Replace batteries.

The tuning steps by which the tuned frequency changes on each band have been set at the factory to the proper value for the country where each unit is to be sold. If you use the unit in a country where a different tuning step is required or if the broadcast frequencies in your country change so that you can not tune in radio stations precisely, contact your authorized Onkyo Service Center.

Specifications

AMPLIFIER SECTION	**TX-866**	**TX-844**
Power Output:	80 watts per channel, min. RMS, at 8 ohms, both channels driven, from 20Hz to 20kHz, with no more than 0.04% total harmonic distortion	60 watts per channel, min. RMS, at 8 ohms, both channels driven, from 20Hz to 20kHz, with no more than 0.08% total harmonic distortion
Total Harmonic Distortion:	0.04% at rated power	0.08% at rated power
IM Distortion:	0.04% at rated power	0.08% at rated power
Damping Factor:	60 at 8 ohms	60 at 8 ohms
Frequency Response:	20 – 30,000 Hz ± 1dB	20 – 30,000 Hz ± 1dB
RIAA Deviation:	20 – 20,000 Hz ± 0.8dB	20 – 20,000 Hz ± 0.8dB
Sensitivity and Impedance:	Phono: 2.5mV/50 kohms CD/Tape Play: 150mV/50 kohms Tape Rec: 150mV/3.5 kohms	Phono: 2.5mV/50 kohms CD/Tape Play: 150mV/50 kohms Tape Rec: 150mV/3.5 kohms
Phono Overload:	120mV RMS at 1kHz, 0.04% THD	120mV RMS at 1kHz, 0.08% THD
Signal-to-Noise Ratio:	Phono: 80dB (at 5mV input, IHF-A) CD/Tape: 100dB (IHF-A)	Phono: 80dB (at 5mV input, IHF-A) CD/Tape: 100dB (IHF-A)
Tone Controls:	Bass: ± 10dB at 100Hz Treble: ± 10dB at 10kHz	Bass: ± 10dB at 100Hz Treble: ± 10dB at 10kHz
Muting	−∞	−∞
TUNER SECTION		
FM:		
Tuning Range:	87.9 – 107.9MHz (200kHz steps)	87.9 – 107.9MHz (200kHz steps)
Usable Sensitivity:	Mono: 10.8dBf, 1.9μV Stereo: 17.2dBf, 4.0μV	Mono: 11.2dBf, 2.0μV Stereo: 17.2dBf. 4.0μV
50dB Quieting Sensitivity:	Mono: 17.2dBf, 4.0μV Stereo: 37.2dBf, 40μV	Mono: 17.2dBf, 4.0μV Stereo: 37.2dBf, 40μV
Capture Ratio:	1.5dB	1.5dB
Image Rejection Ratio:	40dB	40dB
IF Rejection Ratio:	90dB	90dB
Signal-to-Noise Ratio:	Mono: 73dB Stereo: 67dB	Mono: 72dB Stereo: 66dB
Alternate Channel Attenuation:	55dB	55dB
AM Suppression Ratio:	50dB	50dB
Harmonic Distortion:	Mono: 0.15% Stereo: 0.25%	Mono: 0.15% Stereo: 0.30%
Frequency Response:	30 – 15,000Hz ± 1.5dB	30 – 15,000Hz ± 1.5dB
Stereo Separation:	45dB at 1kHz / 30dB at 100 – 10,000Hz	45dB at 1kHz / 30dB at 100 – 10,000Hz
Muting Level:	17.2 dBf, 4μV	17.2dBf, 4μV
AM:		
Tuning Range:	530 – 1710kHz (10kHz steps)	530 – 1710kHz (10kHz steps)
Usable Sensitivity:	30μV	30μV
Image Rejection Ratio:	40dB	40dB
IF Rejection Ratio:	40dB	40dB
Signal-to-Noise Ratio:	40dB	40dB
Harmonic Distortion:	0.7%	0.7%
GENERAL		
Power Supply:	AC120V, 60Hz	AC120V, 60Hz
Dimensions (W x H x D):	435 x 137 x 350 mm 17-1/8"x 5-3/8"x 13-3/4"	435 x 137 x 350 mm 17-1/8" x 5-3/8" x 13-3/4"
Weight:	9.0 kg.,19.8 lbs	9.0 kg., 19.8 lbs.

Specifications and features are subject to change without notice.

ONKYO CORPORATION

International Division: Onarimon Yusen Bldg., 23-5, Nishi-Shimbashi 3-chome, Minato-ku,
TOKYO 105, JAPAN Tel: 03-432-6987 Fax: 03-436-6979
ONKYO U.S.A CORPORATION
200 Williams Drive, Ramsey, N.J. 07446, U.S.A.
Tel: 201-825-7950 Fax: 201-825-8150

SN 29341515B

024-12-1K-ASA Printed in Japan E